REMARKS

Applicants respectfully request reconsideration in view of the above amendments and the following remarks. Applicants amend claims 1, 10, 16 and 25. Applicants do not add any claims or cancel any claims. Accordingly, claims 1-30 remain pending in the application.

I.   Claims Rejected Under 35 U.S.C. § 103

Claims 1-5, 8-14, 16-20 and 23-29 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over "Reducing Branch Misprediction Penalties Via Dynamic Control Independence Detection," by Chou et al. (hereinafter "Chou") in view of U.S. Patent No. 6,542,984 issued to Keller, et al (hereinafter "Keller").

To establish a *prima facie* case of obviousness the Examiner must show that the cited references teach or suggest each of the elements of a claim. In regard to claims 1 and 10, these claims, as amended, include the elements of "the scheduler to transform a set of mispredicted instructions into move instructions" and "transforming a set of mispredicted instructions into move instructions." Applicants believe that Chou in view of Keller does not teach or suggest these elements of claims 1 and 10. Rather, Chou teaches that mispredicted instructions are discarded and data dependencies are resolved by execution of the correct path after a misprediction. See section 2.1.2.1 on page 111 of Chou.

The Examiner has not relied upon and the Applicants have been unable to discern any part of Keller that teaches these elements of claims 1 and 10. Thus, Chou in view of Keller does

not teach or suggest each of the elements of claims 1 and 10, as amended. Accordingly, reconsideration and withdrawal of the obviousness rejection of claims 1 and 10 are requested.

In regard to claims 2-5, 8, 9, and 11-14, these claims depend from independent claims 1 and 10, respectively, and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to independent claims 1 and 10 these claims are not obvious over Chou in view of Keller. Accordingly, reconsideration and withdrawal of the obviousness rejection of these claims are requested.

In regard to claims 16 and 25, these claims, as amended, include the elements of "a branch predictor to issue a first branch prediction at a branch location in a program and to induce exact convergence" and "means for inducing exact convergence in a branch prediction," respectively. The Examiner has acknowledged that Chou and Keller fail to teach the inducement of exact convergence. See the rejection of claims 7 and 22 on page 13 of the Office Action. The Examiner relied on "Branch Prediction Using Selective Branch Inversion" by Manne et al. (hereinafter "Manne") to teach this element of claims 7 and 22. However, the Applicants have reviewed section 2.2, 3rd paragraph, of Manne and have been unable to discern any part therein that teaches these elements of claims 16 and 25, as amended. There appears to be no mention in Manne of using a confidence estimation to induce exact conversion. Rather, Manne teaches the use of confidence estimation to improve the performance of a branch predictor by increasing the accuracy of the branch prediction. Thus Chou, Keller and Manne fail to teach the use of a branch predictor to induce exact conversion. Rather, the proposed combination of Manne with Chou and Keller would only result in a device that improved prediction accuracy. Thus, the cited references do not teach or suggest the elements of claims 16 and 25. Accordingly, reconsideration and withdrawal of the obviousness rejection of claims 16 and 25 are requested.

and 25. Accordingly, reconsideration and withdrawal of the obviousness rejection of claims 16 and 25 are requested.

In regard to claims 17-10, 22, 23 and 26-29 these claims depend from independent claims 16 and 25, respectively, and incorporate the limitations thereof. Thus, at least the reasons mentioned above in regard to independent claims 16 and 25 these claims are not obvious over Chou in view of Keller. Accordingly, reconsideration and withdrawal of the obviousness rejection of these claims are requested.

Claims 6 and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Chou in view of Keller in further view of "Computer Architecture: A Quantitative Approach" by Hennessey et al., (hereinafter "Hennessey").

Claims 6 and 21 depend from independent claims 1 and 16, respectively, and these claims incorporate the limitations of their respective independent claims. Thus, at least for the reasons mentioned above in regard to independent claims 1 and 16, Chou in view of Keller does not teach each of the elements of these claims. Further, Hennessey does not cure the defects of Chou and Keller. The Examiner has not relied upon and the Applicants have been unable to discern any part of Hennessey that teaches or suggests transforming a set of mispredicted instructions into move instructions or inducing exact convergence by a branch predictor. Thus, Chou in view of Keller and in further view of Hennessey does not teach or suggest each of the elements of claims 6 and 21. Accordingly, reconsideration and withdrawal of the obviousness rejection of these claims are requested.

Claims 7 and 22 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Chou in view Keller and Hennessey and in further view of Manne.

Claims 7 and 22 depend from independent claims 1 and 16 and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to independent claims 1 and 16, Chou, Keller and Hennessey do not teach or suggest each of the elements of these claims. Further, as discussed in regard to independent claims 16 and 25, Manne does not cure the defects of Chou, Keller and Hennessey as it does not teach the use of the confidence estimator for the purposes of inducing an exact convergence point as recited in each of these claims. Thus, Chou, Keller, Hennessey and Manne fail to teach or suggest each of the elements of claims 7 and 22. Accordingly, reconsideration and withdrawal of the obviousness rejection of claims 7 and 22 are requested.

Claims 15 and 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Chou in view of Keller and in further view of Manne.

Claims 15 and 30 depend from independent claims 10 and 25, respectively, and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to independent claims 10 and 25, Chou and Keller fail to teach each of the elements of these claims. And as further discussed in regard to claims 16, 20 and 25, Manne fails to cure the defects of Chou and Keller as it fails to teach a branch predictor that induces an exact convergence point. Accordingly, reconsideration and withdrawal of the obviousness rejection of claims 15 and 30 are requested.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely claims 1-30, patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207 3800.

Respectfully submitted,

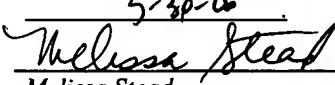BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: __5/30__, 2006

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment; Commissioner of Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450:

Melissa Stead   *Date*